

**REMARKS**

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

**Status of Claims:**

Claim 3 is currently being cancelled.

Claims 1, 9, 13, 14, 19 and 20 are currently being amended.

Claim 24 is currently being added, whereby this claim is readable on the elected species

This amendment and reply adds, cancels and amends claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claims remain under examination in the application, is presented, with an appropriate defined status identifier.

After adding, canceling and amending the claims as set forth above, claims 1, 2 and 4-24 are now pending in this application, whereby claims 10-18 and 21-23 are withdrawn from consideration as being directed to non-elected species.

**Claim Rejections – Prior Art:**

In the Office Action, claims 1-3, 7, 9, 19 and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Japanese laid open patent application JP 11142520 to Arita et al. (in view of English translation) in view of U.S. Patent Publication No. 2003/0201878 to Bai et al.; and claim 8 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Arita et al. in view of Bai et al. and further in view of U.S. Patent Publication No. 2002/0091479 to Maruko et al. and U.S. Patent Publication No. 2001/0016798 to Kodaka et al. These rejections are traversed with respect to the presently pending claims under rejection, for at least the reasons given below.

Presently pending independent claim 1 now includes the features of non-canceled claim 3, and recites, among other things:

*a variation rate estimating section that estimates a variation rate of the detection range of the vehicular forward substance detecting section when the impulse detecting section detects that the impulse has been applied to the forward substance detecting section; and*

*a vehicular traveling control modifying section that modifies a control method of the vehicular travel controlling section in accordance with the variation rate estimated by the variation rate estimating section*

Arita et al. describes distance measuring equipment for a vehicle, such that the estimation of a deviation quantity of an optical axis from the average center (optimum center position) of a detection area which is coincident with an average center of a preceding vehicle obtained by a statistical treatment of a plurality of detection data is made by carrying out averaging processes of detection values that are detected at all times, and, when the estimated deviation quantity is equal to or larger than a predetermined value of deviation quantity, traveling control is avoided. See paragraph 0021 of Arita et al., for example.

Bai et al describes that, when a control determining unit determines that there is a collision risk, a forward collision warning or an avoidance control is executed. Neither Arita et al. nor Bai et al. teaches or suggests the detection of the collision, that is, neither reference teaches or suggests the detection of an impulse that causes a detection range to be varied. Furthermore, neither reference teaches or suggests estimating a variation rate of the detection range of a vehicular forward substance detecting section when an impulse has been applied to a vehicle, and neither reference teaches or suggests modifying a control method in accordance with a variation rate estimated by a variation rate estimating section.

Turning now to the rejection of claim 3, whereby those features are now recited in independent claim 1, paragraphs 0024 and 0025 of Arita et al. describes that a steering angle sensor or yaw rate sensor is used to determine a run direction of a vehicle, whereby no impulse detection is described in these paragraphs of Arita et al.

Paragraphs 0032 to 0034 of Arita et al. describe a steering angle sensor that detects an angle of lock, a yaw rate sensor and a wheel speed sensor, whereby no impulse detection is described in these paragraphs of Arita et al. Paragraphs 0035 to 0039 of Arita et al. describe changing the setting-out position on data processing in a scanning area of a detection area, whereby no impulse detection is described in these paragraphs of Arita et al.

Paragraphs 0056 to 0068 of Arita et al. describe a procedure for estimating a distance between vehicles, based on multiple scans, whereby no impulse detection is described in these paragraphs of Arita et al.

Accordingly, since Arita et al. does not teach or suggested the claimed variation rate estimating section that estimates a variation rate of the detection range of a vehicular forward substance detecting section when an impulse detecting section detects that an impulse has been applied to the forward substance detecting section, and since none of the other cited art of record rectifies this deficiency of Arita et al., presently pending independent claim 1 patentably distinguishes over the cited art of record.

**New Claim:**

New claim 24 has been added to recite features described, for example, in paragraph 0045 of the specification, whereby such features are not believed to be taught or suggested by the cited art of record, when taken as a whole.

**Conclusion:**

Since all of the issues raised in the Office Action have been addressed in this Amendment and Reply, Applicant believes that the present application is now in condition for allowance, and an early indication of allowance is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing or a credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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